

## Claims

What is claimed is:

1. A magneto-optical recording medium having a recording layer and a reflective layer on a substrate characterized in that the recording layer has a layered structure in which a garnet ferrite layer, and any one of a spinel ferrite layer, rutile-type oxide layer or a hematite layer are layered.
2. A magneto-optical recording medium according to Claim 1, wherein said recording layer has tracks on which data are recorded, and said layer structure is formed at least on the tracks.
3. A magneto-optical recording medium according to Claim 2, wherein only garnet ferrite layers are present between said tracks.
4. A magneto-optical recording medium according to Claim 1, wherein said recording layer is located between said substrate and said reflective layer.
5. A magneto-optical recording medium according to Claim 1, wherein said reflective layer is located between said substrate and said recording layer.
6. A magneto-optical recording medium according to Claim 1, wherein the thickness of said garnet ferrite layer is 40 to 400nm, and that of said spinel ferrite layer, said rutile-type oxide layer or said hematite layer is 10 to 100nm.
7. A magneto-optical recording medium according to Claim 1, wherein said recording layer has a multi-layered structure in which a plurality of garnet ferrite layers and a plurality of spinel ferrite layers, rutile-type oxide layers or hematite layers are layered.
8. A magneto-optical recording medium according to Claim 7, wherein the thickness of said recording layer is 40 to 1000nm.

9. A magneto-optical recording medium according to Claim 1, wherein grooves are formed on the surface of at least one of said substrate, said reflective layer or said recording layer.
10. A magneto-optical recording medium according to Claim 1, wherein loads are attached to the surface of at least one of said substrate, said reflective layer or said recording layer.
11. A magneto-optical recording medium according to Claim 1, wherein a transparent layer is formed on the surface of said recording layer or said reflective layer.
12. A magneto-optical recording medium according to Claims 11, wherein grooves are formed on the surface of said transparent layer.
13. Manufacturing method of a magneto-optical recording medium according to Claim 1 characterized by comprising a step of heat treatment at a temperature of 500 to 700 °C after the formation of said recording layer.
14. Manufacturing method of a magneto-optical recording medium according to Claim 1 characterized by comprising a step of heat treatment at a temperature of 600 to 630 °C after the formation of said recording layer.
15. A magneto-optical recording and playback device to record and playback data using a magneto-optical recording medium, characterized in that the wavelength of the light for recording data in said magneto-optical recording medium is different from the wavelength of the light for reading data from said magneto-optical recording medium.
16. A magneto-optical recording and playback device to record and playback data according to Claim 15 characterized in that said magneto-optical recording medium has a recording layer which comprises a garnet ferrite layer.
17. A magneto-optical recording and playback device according

to Claim 15, wherein said magneto-optical recording medium is the magneto-optical recording medium according to Claim 1.

18. A magneto-optical recording and playback device according to Claim 15, wherein said light for recording and said light for reading are provided by one light source.